II. AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-4 (Cancelled)

Claim 5 (Withdrawn) The method for treatment and prevention of dental caries of claim 2 wherein the variable region of the light chain of the antibody comprises the nucleic acid sequence of SEQ ID NO: 5.

Claim 6 (Withdrawn) The method for treatment and prevention of dental caries of claim 2 wherein the variable region of the heavy chain of the antibody comprises the nucleic acid sequence of SEQ ID NO: 7.

Claim 7 (Withdrawn) The method for treatment and prevention of dental caries of claim 2 wherein the variable region of the light chain of the antibody comprises the nucleic acid sequence of SEQ ID NO: 9.

Claim 8 (Withdrawn) The method for treatment and prevention of dental caries of claim 2 wherein the variable region of the heavy chain of the antibody comprises the nucleic acid sequence of SEQ ID NO: 11.

Claims 9-10 (Cancelled)

Claims 11 (Withdrawn) The method for treatment and prevention of dental caries wherein the variable region of the light chain of the antibody of claim 2 comprises the amino acid sequence of SEQ ID NO: 6.

Claim 12 (Withdrawn) The method for treatment and prevention of dental caries wherein the variable region of the heavy chain of the antibody of claim 2 comprises the amino acid sequence of SEQ ID NO: 8.

Claim 13 (Withdrawn) The method for treatment and prevention of dental caries wherein the variable region of the light chain of the antibody of claim 2 comprises the amino acid sequence of SEQ ID NO: 10.

Claim 14 (Withdrawn) The method for treatment and prevention of dental caries wherein the variable region of the heavy chain of the antibody of claim 2 comprises the amino acid sequence of SEQ ID NO: 12.

Claims 15-17 (Canceled)

Claim 18 (Withdrawn) The method for treatment and prevention of dental caries of claim 17 wherein the purified antibody is produced through the steps of:

a) immunizing mice which have been genetically altered to produce human antibodies with at least one cariogenic organism;

b) generating hybridomas which secrete antibodies specific to at least one cariogenic organism; and

c) isolating the antibodies of step b).

Claim 19 (Withdrawn) The method for treatment and prevention of dental caries of claim 17 wherein the purified antibody is produced through the steps of:

d) immunizing isolated human B lymphocytes in vitro with at least one cariogenic organism;

e) generating hybridomas which secrete antibodies specific to at least one cariogenic organism;

f) isolating the antibodies of step b).

Claim 20 (Withdrawn) The method for treatment and prevention of dental caries of claim 17 wherein the purified antibody is produced through the steps of:

g) isolating B lymphocytes from humans with an acute infection of at least one cariogenic organism;

h) generating hybridomas which secrete antibodies specific to at least one cariogenic organism; and

i) isolating the antibodies of step b).

Claim 21 (Withdrawn) The method for treatment and prevention of dental caries of claim 17 wherein the purified antibody is produced through the steps of:

j) isolating the genetic sequence that codes for the expression of said variable region;

k) cloning the genetic sequence that codes for the expression of said variable region;

l) linking the genetic sequence that codes for the expression of said variable region to the genetic sequence that codes for the expression of said constant region;

m) expressing said linked sequence; and

n) isolating the expressed antibodies of step d).

Claim 22 (Withdrawn) The method for treatment and prevention of dental caries of claim 21 wherein step a) is accomplished by screening a phage display random library.

Claim 23 (Withdrawn) The method for treatment and prevention of dental caries of claim 21 wherein the genetic sequence that codes for the expression of said constant region in step c) is derived from IgG or IgM antibodies.

Claim 24 (Withdrawn) The method for treatment and prevention of dental caries of claim 21 wherein the expression of said linked sequence in step d) is conducted in an expression system selected from a group comprising animal, human, chicken egg, or plant.

Claim 25 (Currently Amended) A method for treating or preventing dental caries comprising administering to the oral cavity of a subject in need of such treatment a chimeric monoclonal antibody, wherein the chimeric antibody specifically binds to a cariogenic organism associated with dental caries and elicits a humoral immune response in the oral cavity of the subject to an antigen ~~displayed by~~ of the cariogenic organism ~~from the subject~~, wherein the portion of the chimeric monoclonal antibody that binds to the cariogenic organism is derived from a species other than that of the treated subject ~~in need of such treatment~~ and wherein the portion of the chimeric monoclonal antibody that triggers the humoral immune response is from the same species of the subject.

Claim 26. (Previously presented) The method of claim 25, wherein the cariogenic organism is *Streptococcus mutans*.

Claim 27. (Previously presented) The method of claim 25, wherein the chimeric monoclonal antibody includes a complementarity determining region of a monoclonal antibody that specifically binds to *S. mutans*.

Claim 28. (Currently amended) The method of claim 25, wherein the chimeric monoclonal antibody includes a complementarity determining region of a monoclonal antibody produced by a hybridoma deposited with the American Type Culture Collection as ATCC No. ~~1)~~ HB12559, which is designated SWLA1~~, 2) ATCC No. HB12560, which is designated SWLA2, or 3) ATCC No. HB12258, which is designated SWLA3~~.

Claim 29. (Currently Amended) The method of claim 25, wherein the variable region of the light chain of the chimeric monoclonal antibody ~~includes an~~ comprises the amino acid sequence ~~of~~ as shown in SEQ ID NO. 2.

Claim 30. (Previously presented) The method of claim 29, wherein the amino acid sequence is encoded by a nucleic acid sequence comprising SEQ ID NO. 1.

Claim 31. (Currently Amended) The method of claim 25, wherein the variable region of the heavy chain of the chimeric monoclonal antibody ~~includes an~~ comprises the amino acid sequence ~~of~~ as shown in SEQ ID NO. 4.

Claim 32. (Previously presented) The method of claim 31, wherein the amino acid sequence is encoded by a nucleic acid sequence comprising SEQ ID NO. 3.

Claim 33. (Previously presented) The method of claim 25, wherein the chimeric monoclonal antibody includes a constant region of IgG antibody or IgM antibody.

Claim 34. (Previously presented) The method of claim 25, wherein the subject in need of such treatment is a human and the chimeric monoclonal antibody includes a constant region of human IgG antibody or IgM antibody.

Claim 35. (Previously presented) The method of claim 25, wherein the chimeric monoclonal antibody is a recombinant chimeric monoclonal antibody.

Claim 36. (Previously presented) The method of claim 25, wherein the chimeric monoclonal antibody is produced from a transgenic plant.

Claim 37. (Previously presented) The method of claim 25, wherein the subject in need of such treatment is a mammal.

Claim 38. (Previously presented) The method of claim 25, wherein the subject in need of such treatment is a human, dog, or cat.

Claim 39. (Previously presented) The method of claim 25, wherein the chimeric monoclonal antibody is administered orally.

Claim 40. (Currently Amended) A chimeric monoclonal antibody that specifically binds to a cariogenic organism and elicits a humoral immune response to an antigen ~~displayed by~~ of the cariogenic organism in the oral cavity of a subject that hosts the cariogenic organism, wherein the portion of the monoclonal antibody that binds to the cariogenic organism is derived from a species other than that of the subject ~~that hosts the cariogenic organism~~ to be treated with said chimeric monoclonal antibody and wherein the portion of the monoclonal antibody that triggers the humoral immune response is from the same species of the subject.

Claim 41. (Previously presented) The chimeric monoclonal antibody of claim 40, wherein the cariogenic organism is *S. mutans*.

Claim 42. (Previously presented) The chimeric monoclonal antibody of claim 40, wherein the portion of the monoclonal antibody that binds to the cariogenic organism includes a complementarity determining region of a monoclonal antibody that specifically binds to *S. mutans*.

Claim 43. (Currently Amended) The chimeric monoclonal antibody of claim 40, wherein the portion of the monoclonal antibody that binds to the cariogenic organism includes a complementarity determining region of a monoclonal antibody produced by a hybridoma deposited with the American Type Culture Collection as ATCC No. ~~1)~~ HB12559, which is designated SWLA1~~, 2) ATCC No. HB12560, which is designated SWLA2, or 3) ATCC No. HB12258, which is designated SWLA3~~.

Claim 44. (Currently Amended) The chimeric monoclonal antibody of claim 40, wherein the variable region of the light chain of the antibody ~~includes an~~ comprises the amino acid sequence ~~of~~ as shown in SEQ ID NO. 2.

Claim 45. (Previously presented) The chimeric monoclonal antibody of claim 44, wherein the amino acid sequence is encoded by a nucleic acid sequence comprising SEQ ID NO. 1.

Claim 46. (Currently Amended) The chimeric monoclonal antibody of claim 40, wherein the variable region of the heavy chain of the antibody ~~includes an~~ comprises the amino acid sequence ~~of~~ as shown in SEQ ID NO. 4.

Claim 47. (Previously presented) The chimeric monoclonal antibody of claim 46, wherein the amino acid sequence is encoded by a nucleic acid sequence comprising SEQ ID NO. 3.

Claim 48. (Previously presented) The chimeric monoclonal antibody of claim 40 having a constant region of IgG antibody or IgM antibody.

Claim 49. (Previously presented) The chimeric monoclonal antibody of claim 40, wherein the subject that hosts the cariogenic organism is a human and the chimeric monoclonal antibody includes a constant region of human IgG antibody or IgM antibody.

Claim 50. (Previously presented) The chimeric monoclonal antibody of claim 40 as a recombinant chimeric monoclonal antibody.

Claim 51. (Previously presented) The chimeric monoclonal antibody of claim 40 produced from a transgenic plant.

Claim 52. (Previously presented) The chimeric monoclonal antibody of claim 40, wherein the subject that hosts the cariogenic organism is a mammal.

Claim 53. (Previously presented) The chimeric monoclonal antibody of claim 40, wherein the subject that hosts the cariogenic organism is a human, dog, or cat.